CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1-20.   (Canceled)

21.   (Currently Amended) A method of identifying a melanoma comprising the steps of

a.. obtaining a human tissue sample; and

b. measuring the gene expression levels of

PLAB (SEQ ID NO: 1) and L1CAM (SEQ ID NO: 2) wherein the gene expression

levels above pre-determined cut-off levels that correlate to at least a fifteen-fold

over expression (relative to normal skin cells) of said genes are indicative of the

presence of a melanoma in the sample, and wherein gene expression is determined

by nucleic acid amplification conducted by polymerase chain reaction (PCR) of

RNA extracted from the sample.

22.   (Previously presented) The method of claim 21 wherein the PCR products comprise

SEQ ID NOs: 25 and 26.

23. (Original) The method of claim 22 wherein the PCR products include fluorophores.

24. (Original) The method of claim 23 wherein the fluorophores are selected from the

group consisting of Fam, Texas Red, Cal Red, C1, Cy5, and Cy3.

25. (Original) The method of claim 24 wherein the fluorophores correspond to PLAB:

Fam; L1CAM: Texas Red or Cal Red, tyrosinase: C1; PBGD: Cy5, where applicable.

26. (Original) The method of claim 21 wherein said PCR is reverse transcription

polymerase chain reaction (RT-PCR).

27. (Original) The method of claim 26, wherein the RT-PCR further comprises one or more internal control reagents.

28. (Original) The method of claim 21 wherein RNA is extracted from the sample by:

    a. homogenizing the sample to produce an homogenate;

    b. contacting the homogenate with a substrate containing, or to which is affixed, an RNA-binding material;

    c. allowing the RNA to bind to the RNA binding material;

    d. washing the substrate under conditions sufficient to remove any contaminants, interferents and un-bound RNA; and

    e. eluting bound RNA from the substrate.

29- 221. (Canceled)